



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,330	09/04/2003	Stephen W. Foss	6080 FOS P43 US	6113
26486	7590	03/10/2005	EXAMINER	
PERKINS, SMITH & COHEN LLP ONE BEACON STREET 30TH FLOOR BOSTON, MA 02108			SALVATORE, LYNDIA	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/655,330	<b>Applicant(s)</b> STEPHEN W FOSS	
	<b>Examiner</b> Lynda M Salvatore	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 85-101 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 85-101 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/04/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION*****Claim Objections***

1. Claims 93 and 94 are objected to because of the following informalities: The acronym "PETG" does not adequately define the polyester material. It is suggest that Applicant fully state what "PETG" represents. Appropriate correction is required.

***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 87-101 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 46-52 of copending Application No. 10/765,255. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 87-101 of the instant application are encompassed by the claimed subject matter in copending Application No.10/765,255.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 87-101 are provisionally rejected under the judicially created doctrine of

Art Unit: 1771

obviousness-type double patenting as being unpatentable over claims 23,24,30,39-49,55,56-59, and 64-78 of copending Application No. 10/762,920. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 87-101 of the instant application are encompassed by claimed subject matter in copending Application No. 10/762,920.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 85-87 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,12, and 23 of copending Application No. 10/765,414. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 85-87 of the instant application are encompassed by the claimed subject matter in copending Application No. 10/762,920.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 85-87 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,5,7,11 and 13 of copending Application No. 10/768840. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 85-87 of the instant application are encompassed by the claimed subject matter in copending Application No. 10/762,920.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 1771

7. Claims 85-87 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,12, and 23 of copending Application No. 10/406720. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 85-87 of the instant application are encompassed by the claimed subject matter in copending Application No. 10/406720.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 93 recites the limitation "the carrier for color pigments" in line 2. There is insufficient antecedent basis for this limitation in the claims 85 and 87.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 85,86,88,89,92 and 95-101 are rejected under 35 U.S.C. 102(b) as being anticipated by Ando et al., US 5,064,599.

The patent issued to Ando et al., teaches forming sheath/core conjugate fibers having a high melting core and a low melting sheath (Claim 3). The sheath/core fiber cross section includes a range from 30:70 to 70:30 (Claim 4). Said sheath component

Art Unit: 1771

includes .06-5 weight percent of an anti-bacterial metal ion (Claim 5). Said metal ion includes silver, copper and zinc (Claim 8). With regard to the limitation pertaining to the thickness of the sheath in microns being approximately two times the nominal particle size in microns of the additive, Ando et al., teaches employing fine particles. Specifically, Ando et al., teaches in the case where the fiber diameter is large, the particle size may be from several microns to several hundred microns. As such, based on such a disclosure, it is the position of the Examiner that said thickness of the sheath and particle size limitations would be met if fine particles were employed in fibers having larger diameters. Applicant is invited to evidence otherwise. With regard to the fabric limitations, Ando et al., teaches forming a variety of articles such as fabrics, wall-coverings, diapers, bedcloths, or tissues (Claim 12).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 85-89 and 95-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrison, US 3,959,556 in view of Ando et al., US 5,064,599.

The patent issued to Morrison teaches a fabric comprising a blend of thermoplastic fibers comprising at least .1 percent by weight of an anti-microbial agent and natural fibers such as cotton (Title and Abstract). Suitable thermoplastic resin materials include those made from polyamides and polyolefins. Said resins typically have

Art Unit: 1771

melting points below 200 degrees C. Morrison teaches forming various articles such as fabrics and diapers (Column 4, 39-44). Morrison fails to the claimed multi-component fibers, however, the patent issued to Ando et al., teaches forming sheath/core conjugate fibers having a high melting core and a low melting sheath (Claim 3). The sheath/core fiber cross section includes a range from 30:70 to 70:30 (Claim 4). Said sheath component includes .06-5 weight percent of an anti-bacterial metal ion (Claim 5). Said metal ion includes silver, copper and zinc (Claim 8). With regard to the limitation pertaining to the thickness of the sheath in microns being approximately two times the nominal particle size in microns of the additive, Ando et al., teaches employing fine particles. Specifically, Ando et al., teaches in the case where the fiber diameter is large, the particle size may be from several microns to several hundred microns. As such, based on such a disclosure it the position of the Examiner that said thickness of the sheath and particle size limitations would be met if fine particles were employed in fibers having larger diameters. Applicant is invited to evidence otherwise. With regard to the fabric limitations, Ando et al., teaches forming a variety of articles such as fabrics, wall-coverings, diapers, bedcloths, or tissues (Claim 12). Ando et al., specifically teaches that heating the low melting point sheath exposes the anti-microbial particles, thus resulting in having increased anti-microbial properties (Abstract).

Therefore, motivated by the desire to provide a fabric having increased anti-microbial properties it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the fabrics made by Morrison with the multi-component fibers taught by Ando et al.

Art Unit: 1771

14. Claims 85,86,88,92 and 95-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzog et al., US 6,037,057 in view of Rock et al., US 6,194,332.

The patent issued to Hartzog et al., is directed to a sheath-core polyester fiber including an antimicrobial agent (Title). With respect to claim 85, Hartzog et al., teaches a sheath-core polyester fiber comprising a polyester core and a polyester sheath, wherein the sheath includes an anti-microbial agent (column 3, lines 55 - 65). Hartzog et al., teaches in table 3 that the sheath can comprise 20 - 50% of the fiber, thus implying that core comprising about 80 - 50% of the fiber. Hartzog et al., teaches that the anti-microbial agent is from 0 to 6.95 microns distance from the surface of the sheath (Figure 6), implying that the thickness of the sheath is at least 7 microns. It should be noted that if the thickness of the sheath is about 7 microns and the zinc oxide has a size of 3.5 microns, the sheath would be about two times the nominal particle size of the zinc oxide. Hartzog et al., teaches that one type of anti-microbial agent used is zinc oxide, which ranges in size from 0.5 - 3.5 microns (column 5, lines 45 - 50). With respect to the amount of anti-microbial agent employed, Hartzog et al., teaches a range from .5-20 weight percent (Column 5, 1-66). Hartzog et al., teaches that that efficacy of the anti-microbial agent is maximized since the particles are located on the surface (Column 3, 5-16). Hartzog et al., further teaches that since the efficacy of the anti-microbial properties are increased, less anti-microbial agent is needed and the fiber is therefore less expensive to produce (Column 3, 5-16). Hartzog et al., fails to specifically teach forming a textile article from the anti-microbial fibers, however, the patent issued to Rock et al. is directed to an anti-microbial enhanced knit fabric (Title). Rock et al., teaches a fabric comprising a first and second fabric layer wherein the second fabric layer is exclusively blended with



Art Unit: 1771

treated synthetic fibers having anti-microbial properties (Abstract). Rock et al., teaches that the second layer can comprise polyester (column 3, lines 30 - 35) and the polyester fibers can be coated with silver or copper sulfide to create an anti-microbial fabric layer (column 4, lines 5 - 15).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the anti-microbial fibers taught by Hartzog et al., for the treated synthetic fibers in the second fabric layer taught by Rock et al. Motivation to make such a substitution is found in the economically and anti-microbial effective fibers produced by Hartzog et al.

With regard to all of the intended use limitations recited in claims 95-101 it is the position of the Examiner that since the prior art meets all of the chemical and structural limitations presently set forth there is nothing on record to evidence that the textile provided by the combination of Hartzog et al., in view of Rock et al., could not function in any one of the desired claimed capacities.

15. Claims 90-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando et al., US 5,064,599 in view of Heiman, US 5,290,269.

Ando et al., fails to teach a diaper comprising an absorbent pad and wicking layer, however the patent issued to Heiman teaches a fabric suitable for use in a diaper (Abstract). Said fabric comprises a hydrophobic top portion to wick liquid from the upper surface (Column 6, 30-40). Said fabric also includes a hydrophilic bottom portion (Column 6, 35-56). Heiman teaches employing an absorbent pad in the diaper (Column 9, 55-Column 10, 20). Heiman further teaches providing an anti-microbial finish on the cloth if desired (Column 12, 25-47).

Art Unit: 1771

Therefore, motivated by the desire to provide an anti-microbial diaper it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the anti-microbial fibers of Ando et al., to form the diaper taught by Heiman.

16. Claims 93-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando et al., US 5,064,599 as applied to claim 85 or 86 in view of Haile et al., US 6,495,656.

Ando et al., fails to teach a sheath comprising a pigment and PETG, however, the patent issued to Haile teaches forming various polyester based bi-component fibers comprising a pigment (Column 27, 57-65 and Column 29, 14-20). Haile et al., specifically teaches a bi-component fiber comprising a core of PET and sheath of PETG (Column 62, 50-59). Though, Haile et al., does not specifically teach using the PETG sheath as the carrier for the pigment, it is the position of the Examiner that it would be obvious to add the pigment to sheath component since it would be desirable to provide the surface of the fiber with the pigmented effects.

Therefore, motivated by the desire to provide a colored or pigmented textile it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the textile articles taught by Ando et al., with the PET/PETG pigmented bi-component fibers taught by Haile et al.

17. Claims 93-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzog et al., US 6,037,057 in view of Rock et al., US 6,194,332 as applied to claim 85 or 86 and further in view of Haile et al., US 6,495,656

Art Unit: 1771

The combination of prior art fails to teach a sheath comprising a pigment and PETG, however, the patent issued to Haile teaches forming various polyester based bi-component fibers comprising a pigment (Column 27, 57-65 and Column 29, 14-20). Haile specifically teaches a bi-component fiber comprising a core of PET and sheath of PETG (Column 62, 50-59). Though, Haile et al., does not specifically teach using the PETG sheath as the carrier for the pigment, it is the position of the Examiner that it would be obvious to add the pigment to sheath component since it would be desirable to provide the surface of the fiber with the pigmented effects.

Therefore, motivated by the desire to provide a colored or pigmented textile it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the textile articles taught by Hartzog et al., in view of Rock et al., with the PET/PETG pigmented bi-component fibers taught by Haile et al.

### *Conclusion*

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 571-272-1482. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1482. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1771

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 6, 2005

ls



TERREL MORRIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700